# DRAFT
# Fuel Economy Labeling
# Focus Group Key Questions

## A. Overarching Questions

1. Determine consumer reaction to the current label/information, including comprehension and relative importance of existing metrics.

2. Determine consumer reaction to proposed new metrics, including comprehension and the relative importance of these metrics, when consumer's shop for a new conventional vehicle, a Plug-in Hybrid Elective Vehicle (PHEV), and an Electric Vehicle (EV).

3. What is the most effective way to present the new metrics/information on the label?
    - Encompasses a broad range of issues such as relative prominence and placement of information, use of graphical elements, color, threshold between too little and too much information etc.

4. What is the most effective way to present the statutorily required label information?
    - mpg
    - Estimated annual fuel cost
    - Range of mpg of comparable vehicles
    - Statement about Fuel Economy Guide availability

5. What additional consumer education will be most useful to assist consumers to transition to the new metrics?

## B. Addition of a fuel consumption metric to the label

Consumers are familiar and comfortable with mpg as a measure of fuel economy, while fuel consumption on a per distance basis is an unfamiliar metric for today's consumers.

1. What consumption metric is the most meaningful to consumers?
    - Gallons/100 miles for gasoline operation? Other?
    - kW-hrs/100 miles for electric operation? Other?

2. How can the label be designed to help people learn to make use of a consumption metric in their purchasing decisions?

3. How can we most effectively transition consumers from their current exclusive reliance on mpg label when comparing vehicles' fuel economy to: (1) consider, (2) put equal weight on, or (3) to prefer a consumption metric when comparing vehicles' efficiency.

## C. Addition of an environmental metric to the label

1. If an environmental metric is on the label, how and at what point would consumers use this information in their purchasing decision?

2. Which metric would be most effective in providing consumers the information they need to make smart environmental purchase decisions:
    - Performance measure (such as CO2 grams/mile),
    - Rating (such as the Green Vehicle Guide),
    - Symbol that shows inferior/average/superior performance?

3. Given the answer in 2, what specific design is most effective and how should it be displayed on the label (placement, prominence)?

## D. Enhancements to the fuel cost information displayed on the label

Cost per mile (or per month or year or whatever) depends greatly on a number of assumptions (e.g., fuel price, driving distances, weighting of city and highway driving). It is nevertheless a metric that is comparable across different kinds of vehicles (PHEVs, EVs, and conventional vehicles).

1. Is the average annual fuel cost information on the current label useful information?
    - Did consumers notice and/or use this information in their recent purchase decision?

2. Can the cost information be improved to make it more useful to buyers?

3. Is there a cost metric that is more relevant to consumers, such as monthly, 5-year, lifetime, per fill-up?

4. If the vehicle uses two different fuels or has more than one mode of operation, should the cost metric be listed for each fuel or for each mode of operation?

5. How should this information be displayed on the label to be most useful to consumers?

## E. Labeling of advanced technology vehicles such as PHEVs

PHEVs use two types of fuel, electricity and gasoline, and EVs use only electricity. Measuring fuel use in miles per gallon (or gallons per mile) either does not account for electricity consumption or requires a conversion of electricity to a miles per gallon of gasoline equivalent. In addition, the cost per mile of driving a PHEV depends heavily on how far the vehicle is driven between charges, because the vehicle switches from electricity (or electricity assist) to gasoline-only power.

1. Once participants understand the complexity and dual-fuel nature of a PHEV, what is the most important economy/efficiency/range information to give them so they can make comparisons between (1) various advanced technology vehicles and (2) conventional vehicles and ultimate purchase decisions?

2. For an electric vehicle, what is the most important economy/efficiency/range information to give them so they can make comparisons and purchase decisions?

3. How should the label (or should the label?) communicate to consumers that the fuel costs can vary extraordinarily depending on charging and driving habits?

4. How important is it to display the all-electric (grid electricity) driving range of an EV/PHEV? The battery capacity and/or charging time?

5. Should a PHEV label show information on just grid electricity operation and gasoline-only (i.e., standard hybrid) operation (the "bookends" approach), or should the label include additional information that combines the two modes?